

The Black Box Newsletter

VOL. 1, NO. 3

Bloom County



Captain Midnight Caught?

An Ocala, Florida man, John R. MacDougal, claimed in Federal Court that he was the one and only "Captain Midnight" who blew HBO off the air for a few minutes on April 27, 1986.

In announcing the "Capture" of Captain Midnight, FCC investigators said they used a process of elimination(?) to pinpoint MacDougal and make their arrest. At the same time, it was announced that MacDougal (Captain Midnight) had entered into a plea bargaining agreement in U.S. District Court in Jacksonville, Florida.

U.S. Attorney Larry Gentile said the arrangement calls for the government to recommend a \$5000 fine and one year's probation. MacDougal, and his attorney John M. Green, Jr. had no comment when asked about the specifics of the case.

In our opinion, we're mighty happy that the FCC found someone to play Captain Midnight, and we also feel that the \$5000 fine is very lenient penalty for the "terrorist" act of satellite signal jamming. We also feel that MacDougal can easily recoup the \$5000 fine through magazine, book, and movie deals. While we don't condone signal jamming, we like the attention it brought to the satellite industry. One final question though, who is the real "Captain Midnight"?

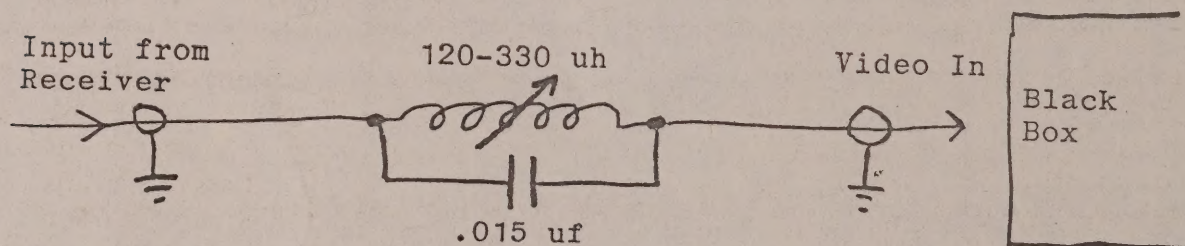
A Word About Analog Audio

In the last issue of our newsletter, we presented plans for an analog audio circuit. This circuit was intended for you "experimenters" who wanted to hear the audio on the stations using analog audio type encryption.

Since publishing those plans, some strange things have been going on at the channels that use analog audio. First, American XXX has announced that they will be dropping their current encryption method and going to the VC II format. This of course will not affect any Black Box owners, but we wonder what kind of deal the current subscribers to American XXX get after paying hundreds for a decoder, and then finding out it will be useless in the near future.

Another station, F.U.N. which had been keeping a very regular schedule of Adult XXX entertainment, has recently been missed by some of its viewers. For unknown reasons, F.U.N. missed several nights of programming, and it was feared by some that they were leaving the air. However, they are back now, and seem to be keeping some kind of a schedule.

In any case, for those of you that watch these stations, and want to experiment with a simple modification that will clear up the sine waves on the screen, try this:

Black Box Legal Problems

If you saw our previous newsletter, you saw where we provided some information that showed you how to get audio on the adult stations, how to turn on a M/A-Com VC II descrambler, and where to buy a completed black box.

Well it seems that we may have stepped on a few toes by publishing that information, because since then we have been contacted by the Attorney General, the Postmaster General, several lawyers, and a Police officer bearing a subpoena for us to testify in court.

Our attorney advises us to be a little more cautious when selecting items to be printed in the newsletter, and in the future not to give technical advice concerning the VC II over the phone.

Black Box Updates

- * Bag of Parts - I've heard that name many times this month in complaints from some of you concerning the way that they are handling parts orders. It seems that they have been very slow in filling orders, and have been shipping only some of the parts.

We contacted the folks at Bag of Parts to find out what was going on, and they told us that they simply under estimated the number of orders that they would receive, and were caught without enough parts. To further complicate matters, their bank was reluctant to let them accept Visa/MC on phone sales, and this caused them to cancel many orders.

They now say that they have almost caught up on all their backorders, and are shipping new orders on time. We suggest that if you can't get a problem resolved with Bag of Parts, that you contact Boresight (1-201-562-0087) and let them know about any problems you might be having.

- * BTW Electronics has announced that they have reduced the price of their circuit board to \$35.00. BTW makes a very good board, and ships immediately upon receipt of your order. You can order from them by mailing them a postcard requesting part # BBS021 to be shipped COD to you. Their address is BTW, RT. 4, Box 492, Eureka Springs, Ar 72632.
- * Jameco, a very reliable supplier of mail order electronics, has announced a complete Black Box Kit, which includes all the components needed to assemble your own black box, except the board, case, and power supply. This kit with a retail value of over \$125.00 is available through Jameco for under \$100.00. Also, the new Jameco catalog is out, and if you're a serious electronics builder, you need this catalog. To order call 1-415-592-8097.
- * For anyone who doesn't already know, if you plan to build the Black Box, always refer to drawing # 8. It contains all the revisions and enhancements. Yes, there are some differences between drawing # 8, and some of the other drawings. This is simply because drawing # 8 is for building the unit, the rest of the drawings explain the theory.
- * Watch Boresight (Spacenet 1, channel 17, 8:00P.M. CST). This is the only show not controlled by the "bad guys", and anyway you may be surprised by what you learn about the VC II.

Let us Know

We welcome your comments, suggestions, articles, photos or other related items that would help make our newsletter better. If you would like to submit something for us to publish, simply mail it to our offices, and if it is something we feel our readers would be interested in, we'll publish it. Thanks for your continued support!

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M/A-Com Has Its Own Legal Problems

In a surprise move, Oak Industries has filed a lawsuit against M/A-Com, alleging that the VideoCipher II encryption Technology violates Oak patents for its Sigma scrambling system. The suit, filed June 17 in the United States District Court in Norfolk, Virginia, seeks unspecified monetary damages as well as preliminary and permanent injunctive relief.

An injunction against M/A-Com could force the company to discontinue its sales of the VC II descrambler, and would also prevent the company from any further licensing of its VC II encryption technology to programmers.

This lawsuit could be a key turning point in the entire scrambling issue. If decoder sales are stopped, then it will be time for Congress to step in and stop all scrambling until there were federal scrambling standards, and parity in the marketplace for cable and satellite consumers.

M/A-Com sells out to General Instrument

General Instrument Corporation has just completed the purchase of M/A-Com's Cable and Home Communications division for \$220 million. The purchase includes the full rights for the license and manufacture of commercial and consumer VideoCipher decoders.

General Instrument, which lost over \$60 million dollars last year, has become through this purchase the largest hardware supplier in the cable or satellite industry.

Still unresolved though is the pending lawsuits filed by Oak Communications against M/A-Com concerning patent infringements by the VC II descrambler. Oak has also sued two other General Instrument divisions which are active in cable equipment manufacturing - Tocom and Jerrold. We look for General Instruments to attempt to purchase Oak Communications.

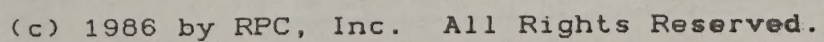
News From Encycloware

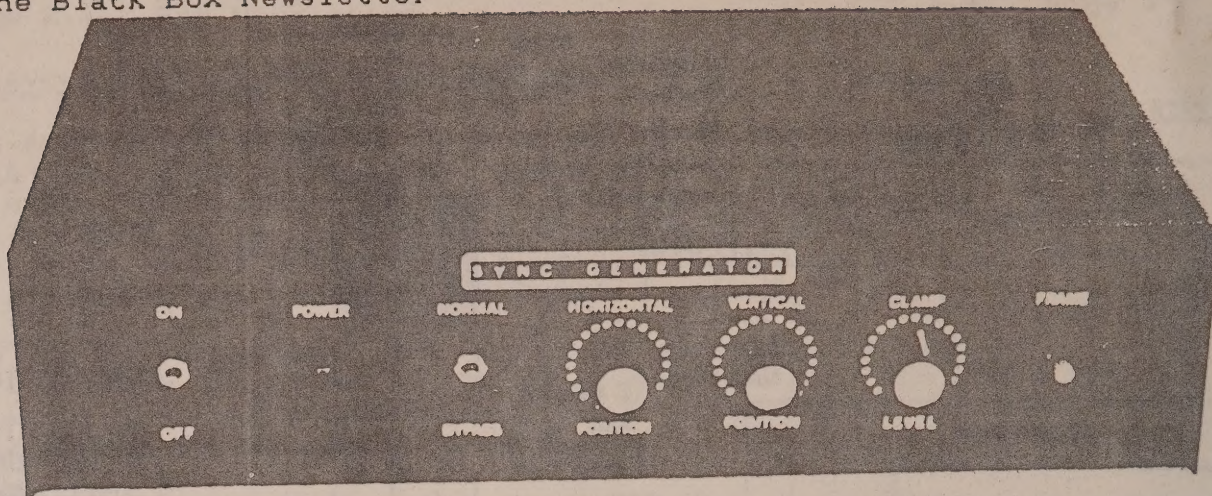
Encycloware, an engineering company that provides assembly, alignment and repair services for the Black Box, has a new phone number. The new number is (919)-746-4961. If you are having problems building your Black Box, give them a call.

Encycloware is aware of several groups working on Oak and M/A-Com audio and there is a good possibility that circuit boards for both audio boards may be available from them within the next 30 to 90 days.

Encycloware also announced the availability of a complete Black Box II kit including the circuit board, the power supply and the case for under \$149.00. For the latest in audio & video board developments, consumers will find Encycloware very helpful.

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Assembled Black Boxes

For those of you that want to "experiment" with the Black Box, but don't want to take the time to build it yourself, there is finally a solution for you. Sparks Unlimited, Inc., a Kerrville, Texas, company has now set up a production facility dedicated solely to the construction of Black Boxes.

Sparks Unlimited which has been heavily involved in the digital electronics field for the last five years doing research, design, and manufacture of state of the art electronic devices is now producing assembled Black Boxes using grade "A" components, a plate thru type P.C. board, and sophisticated testing and alignment procedures.

The Black Boxes are constructed on a made to order basis and delivery is generally two to three weeks after the order is placed. The Black Box built by Sparks incorporates all the latest enhancements including some of their own innovations which make provisions for the forthcoming audio boards.

Sparks also maintains an "Audio Waiting List" of those people that want to be notified as each audio circuit board becomes available and encourages anyone interested in adding audio to their Black Box to contact them.

The Sparks Black Box, pictured above, comes with a 90 day warranty against defects in materials or workmanship, and can be ordered by calling 1-512-257-2196, Monday thru Friday. They accept Visa, MasterCard, and COD.

U7 ROM Code Listing

A complete listing (about 27 pages) of the ROM code from the U7 chip within the VC II is now available. This listing is in computer code, but is fairly well documented. If you are interested in getting a copy of this, you can contact Jim Shackelford at 1-915-658-3637.

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The Serial Number and the VC II

The VC II is an addressable device that can decode satellite signals. This addressability feature allows the device to be turned on or off from a remote computer which sends out a data stream of authorized serial numbers with the satellite signal.

When a VC II is turned on to a scrambled channel, it reads the data stream, checks for a valid serial number, and if it does not find one, it bypasses the decoding logic in its memory, and the channel remains scrambled.

If you knew a serial number that was authorized to receive all encrypted channels (such as the ones used in the M/A-Com test lab, or used by certain cable companies), and then could alter the serial number in your VC II to be the same, your VC II would de-scramble all the channels for you.

The serial number of the VC II is on one single chip in the VC II (I can't tell you which one), and can be reprogrammed using an EPROM burner and a personal computer. In order for you to alter the serial number on your VC II, you must know three things: 1) the chip number to be reprogrammed, 2) the address in the chip containing the serial number, 3) and a valid serial to use.

To get this information you will have to either know someone who can tell or sell you the information or the chip, or have two VC IIs, a EPROM burner, a personal computer, and a little time. With these basic tools you can find the answers to one and two by using a EPROM burner to compare identical chips from two VC II's until a difference is found.

As for finding a authorized serial number, if I told you a valid serial number in this newsletter, M/A-Com would de-authorized it immediately. But, if you think a little bit, I'm sure you will realize that there are several approaches to obtaining an authorized serial number.

Nuts & Volts Stuff

Long before the Black Box Newsletter existed, there was Nuts & Volts, a monthly publication which carries a wide variety of ads for electronic items including Black Boxes, Descramblers, and Decoders. The following ads are reprinted from the current issue:

SATELLITE OWNERS	UNLOCK YOUR VIDEO CIPHER II PLANS AND PARTS \$ 35.00	1-(305)-752-9202
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BY BERNIE BREATHED

